

Chad Conway – SCS Key Project # 2
NIAGARA FALLS BOULEVARD RADIATION SITE, NIAGARA FALLS, NEW YORK

PROJECT DURATION: 1 Year (as of April 2017)

PROJECT END DATE: Ongoing (no definitive end date)

PROJECT REFERENCE: Mr. Eric Daly, On-Scene Coordinator
 US EPA Region 2 ERRD-RPB-PPS
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PROJECT SUMMARY: This project is currently active and includes the assessment and removal of a wide variety of radioactive material, mainly uranium, radium, and thorium, within a mixed commercial and residential area of Niagara Falls, New York. This is a highly complex and technically challenging project. Daily requirements include, but are not limited to:

- Daily air monitoring for particulates utilizing Dust Tracker particulate units that directly correspond to air samples collected using RADeCO high-volume vacuum samplers. Air sampling is conducted daily at each air monitoring station. RADeCO air samplers are calibrated by the manufacturer and equipped with replaceable glass fiber filter media used to collect ambient air samples at a flow rate determined by the EPA Health Physicist in cubic feet per minute (cfm). Prior to and at the end of each air sampling event, a portable calibrator is utilized to recalibrate each RADeCO unit to the desired start flow rate and to obtain the end flow rate in order to determine the average flow rate for the selected sampling period. Each RADeCO unit is mounted on a tripod stand, powered with an electric generator, and positioned in an opposing wind direction. Air samples are collected from perimeter and community air monitoring locations upon initiation of intrusive activities (excavation) and periodically as needed depending on changes in site conditions, expected elevated contaminant concentrations in soils being excavated, and if analytical results of previous air samples indicate there is a need for further sampling. Up to 5 Dust Tracker and RADeCO units are utilized daily.
- Upon the commencement of removal operations, the areas to be excavated are scanned utilizing a gamma survey with a Ludlum 44-20 Sodium Iodide 3 X 3 Gamma Scintillator, as well as an RSX-1 4 X 4 X 16 Sodium Iodide Gamma Scintillator to determine the locations that are above site action levels, and will require removal actions. Once removal actions have been completed and the EPA is confident that the hazardous material has been successfully removed, a gamma survey is conducted again utilizing the Ludlum 44-20 Sodium Iodide 3 X 3 Gamma Scintillator to confirm that all contamination has been successfully removed below the site action levels. Upon completion of the final gamma survey, random soil samples are collected based on the square footage of the excavation area. A static gamma scan is done utilizing the Ludlum 44-20 Sodium Iodide 3 X 3 Gamma Scintillator in counts per minute (cpm) of each of the confirmation sample locations.
- Personnel Contamination Survey. All personnel working in the "exclusion zone" are scanned to ensure that radioactive material has not collected on the person's personal protective equipment (PPE). This is conducted by utilizing a Ludlum Model 3 with a pancake probe. Each part of the body identified on the "Personnel Contamination Survey Sheet" is scanned with the pancake probe. The stabilized value is recorded on the survey sheet and repeated for each part of the body. If each of the readings is below the action level, personnel can doff the PPE and it can be disposed of as non-hazardous waste. If any readings are above the action levels, that portion of the PPE must be disposed of as hazardous. The part of the body of the personnel that was contaminated must be scanned again without that part of PPE. Generally, doffing the PPE will get the reading below the site action levels. However, if the value is still above the site action levels, the area of contamination needs to be wiped down with tack cloth. If contamination persists, consultation with the on-site health physicist is required.

PROJECT ROLE: As Site Cleanup Supervisor, Mr. Conway leads a team conducting assessment and waste characterization, continuous air sampling/monitoring, and the use of an array of highly complex radiation scanning equipment. He provides removal oversight and direct supervision of removal and transportation and disposal operations. Removal and assessment activities began in August 2016 and are ongoing.

REGULATORY REQUIREMENTS: The regulatory requirements follow CERCLA regarding EPA removal actions, USDOT requirements for transportation of radioactive material, Nuclear Regulatory Commission requirements for Disposal Facility Licenses, and OSHA requirements for site safety.

EXPERIENCE RELATED TO QUALIFICATIONS/DUTIES OF THE LABOR CATEGORY: Mr. Conway has over 16 years of professional experience in hazardous waste site assessment, waste characterization, waste management, and remediation/removal. He is experienced as a construction supervisor, overseeing activities conducted on hazardous waste sites including transportation and disposal; environmental and construction health and safety; air monitoring; and air, soil, and water sampling; site management; and equipment calibration and maintenance. He writes and implements work plans, removal/remediation plans, and health and safety plans. He has performed supervision and oversight of numerous field activities for a variety of clients at multiple facilities.